

**HOOD AND DUCT SHOP DRAWINGS
VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING
OPERATIONS
2001 NFPA 96 and 1997 SMC Chapter 5**

Circled items require revision/clarification by contractual documentation (i.e. revised drawings, specifications, addenda, etc.) before plans can be approved. Answers in letterform are not acceptable. **Starting construction before plans approval may be considered as just cause, by the State, to issue a stop work order. [Rule 0780-2-3-.02]**

I. Submittal Requirements

1. Provide two sets of shop drawings that include the hood, cooking equipment, ductwork, fans, and fire protection system [NFPA 96 3.2.1 and 3.2.2.]
2. Hood/duct, fans, controls, and fire protection shop drawings must be approved by the engineer of record prior to our approval.
3. All deep fat fryers must be installed with a 16" space between the fryer and surface flames from adjacent cooking equipment. (NFPA 12.1.2.4)
4. These standards shall apply to residential cooking equipment used for commercial cooking unless the requirements of NFPA 96 1.1.4 are met. [NFPA 96 1.1.2]

II. Cooking Equipment

1. Provide cut sheets all cooking equipment under the hood including the listing information or test data. [NFPA 96 4.1 Chapter 12]
2. All listed appliances must be installed in accordance with terms of their listing and the manufacturer's instruction. [NFPA 96 12.1.2.1]
3. All deep fat fryers must be installed with a 16" space between the fryer and surface flames from adjacent cooking equipment. [NFPA 12.1.2.4]
4. All deep fat fryers must be equipped with a separate high-limit control (thermostat) to shut off fuel or energy when the fat temperature reaches 675 F. [NFPA 96 12.2]

III. Hood, Ductwork, and Fire Suppression

1. Provide a shop drawing for the fire extinguishing equipment. It must comply with UL 300, and must protect the cooking equipment, duct system, grease removal devices, and the exhaust hood. [NFPA 96 10.1 and SMC 507.3] Shop drawings must be provided by a licensed Tennessee fixed fire extinguishing system installer.
2. Provide exhaust and supply duct shop drawings showing the duct size, length, slope, cleanouts, and connection with the hood and exhaust fan. [NFPA 96 Chapter 7]

3. The exhaust duct must lead as directly as practical to the exterior to decrease the fire hazard, and must comply with the following. [NFPA 96 7.1.2]
 - a. Ducts must be constructed of and supported by 16-gauge carbon steel or 18 gauge stainless steel. [SMC 505.1 and NFPA 96 7.5]
 - b. An opening for cleaning must be provided at each change of direction. [NFPA 96 7.3.1, SMC 505.5.10]
 - c. All seams, joints, and penetrations must have liquid tight external welds. [SMC 505.2 and NFPA 96 7.5.2.1]
 - d. An access panel must be provided for hoods with dampers on exhaust or supply collars and for all openings required for accessibility. [NFPA 96 7.1.5 and SMC 505.4]
4. Provide exhaust and supply fan shop drawings and performance data.
 - a. Exhaust motors must be listed for use in greasy atmospheres. [NFPA 96 8.1 and SMC 505.1.36 and 506]
 - b. Provide the exhaust fan's manufacturer, model, horsepower, RPMs, static pressure rating, and performance chart.
 - c. Approved up-blast fans must be hinged and supplied with a flexible weatherproof electrical cable and service hold-open retainers. [NFPA 96 8.1.1.1]
5. Provide a wiring and control diagram showing:
 - a. The fire protection system must activate general and supervisory alarms. [NFPA 96 10.6 and 10.7]
 - b. Interlock of the fire suppression system pull station with electrical panel shunt trips, gas shut-off valves, and the supply fan. [NFPA 96 10.3 and 10.4]
 - c. Supply and exhaust fan interlock. The exhaust fan must continue to operate after the extinguishing system has been activated. [NFPA 96 8.2.3.1]
 - d. Provide supply fan shut off. [NFPA 96 8.3.2]
 - e. Simultaneous operation of the fire suppression system. [NFPA 96 10.3]
6. Provide shop drawings for the hood identifying the manufacturer and model number, exhaust and supply CFM, static pressure for the hood collars. Identify whether the hood is UL listed with or without exhaust dampers. [NFPA 96 5.1.7]
7. A fire damper actuated at a maximum of 286 F must be installed in the supply plenum. [NFPA 96 5.3.4]
8. A damper must not be installed in the exhaust system. [NFPA 96 9.1.1 and SMC 505.11]